

IN THE CLAIMS:

1. (Currently Amended) A low-pressure mercury lamp, comprising:
an arc tube whose at least one end is wound around an axis entirely in a longitudinal direction thereof; and
a holding member that holds the arc tube in a state where the at least one end is
5 inserted in an opening formed in a bottom wall of the holding member,
wherein the holding member includes a groove that is at a position corresponding to a position of the at least one end and is continuous to the opening, and
the groove is formed such that the at least one end of the arc tube wound around the axis fits therein and a depth thereof increases as a distance from the opening decreases, the
10 holding member includes an insertion guiding unit for guiding the at least one end of the arc tube to be inserted into the opening while preventing positional deviation of the at least one end, when the arc tube is rotated around the axis to be attached to the holding member.

2. (Original) The low-pressure mercury lamp of Claim 1, wherein
the insertion-guiding unit is formed as a groove extending in a direction in which the end of the arc tube is wound around the axis.

3. (Original) The low-pressure mercury lamp of Claim 2, wherein
a part of the groove that comes in contact with a part of the end of the arc tube has a shape corresponding to a shape of the part of the end of the arc tube.

4. (Original) The low-pressure mercury lamp of Claim 1, wherein
the arc tube includes a pair of lead wires for an electrode extending from the end
of the arc tube,

the opening opens toward a direction of the axis, and

5 the holding member allows the pair of lead wires to be inserted in the opening.

5. (Original) The low-pressure mercury lamp of Claim 4, wherein
the opening is formed at an angle of 20 to 60° inclusive with respect to the axis.

6. (Original) The low-pressure mercury lamp of Claim 4, wherein
the holding member includes a covering unit that is formed so that the opening is
positioned at an edge of the covering unit, the covering unit covering the end of the arc tube, and
the opening is partially formed by a notch created in the covering unit and/or the
5 insertion-guiding unit.

7. (Original) The low-pressure mercury lamp of Claim 1, wherein
the end of the arc tube is bonded within the holding member via a bonding agent.

8. (Original) The low-pressure mercury lamp of Claim 7, wherein
the insertion-guiding unit includes one or more inlets for injecting the bonding
agent in an area between (a) the end of the arc tube placed in the holding member and (b) the
insertion-guiding unit of the holding member.

9. (Original) The low-pressure mercury lamp of Claim 7, wherein
the holding member includes a wall at an internal surface thereof for preventing
the bonding agent from flowing outside.

10. (Original) The low-pressure mercury lamp of Claim 1, wherein
the arc tube includes a pair of lead wires for an electrode extending from the end
of the arc tube, and

5 the holding member includes a supporting unit for supporting the pair of lead
wires while keeping a certain distance between the lead wires.

11. (Original) The low-pressure mercury lamp of Claim 1, wherein
the arc tube includes a glass tube that is turned at a substantially middle thereof
and wound around the axis from the middle, to have a double-spiral structure.

12. (Original) A method for assembling a low-pressure mercury lamp including: an
arc tube whose at least one end is wound around an axis entirely in a longitudinal direction
thereof; and a holding member that includes an insertion-guiding unit for guiding the at least one
end of the arc tube to be inserted into an opening formed in the holding member while
5 preventing positional deviation of the at least one end,

wherein a process of attaching the arc tube to the holding member includes the
steps of:

making the at least one end of the arc tube come in contact, at a peripheral surface
thereof, with the insertion-guiding unit of the holding member; and

10 rotating, in a state where the at least one end of the arc tube is in contact with the
insertion-guiding unit, the arc tube and/or the holding member around the axis, so that the arc
tube has a relative position with respect to the opening of the holding member.

13. (Original) The method for assembling the low-pressure mercury lamp of Claim 12, wherein

the arc tube has a pair of lead wires for an electrode extending from the end of the arc tube,

5 the opening opens toward a direction of the axis, and

the step of making the at least one end of the arc tube come in contact with the insertion-guiding unit of the holding member is carried out in a state where the lead wires are parallel to the direction of the axis.

14. (New) In a lamp having a helical arc tube wound around an axis with a first and second end portion of the arc tube supporting lead wires for electrodes that extend from the respective first and second end portions, the improvement comprising:

5 a holder having a bottom wall with integral first and second covering units extending above the bottom wall and a first and second groove of a configuration to receive and support a rotational movement of the first and second end portions of the arc tube, the first and second grooves are integrally recessed into the bottom wall at predetermined curved distances from the first and second covering units and progressively increase in depth as the first and second grooves curve and extend beneath the respective first and second covering units,

10 the first and second covering units form with the first and second grooves insertion openings of a dimension to approximate a diameter of the arc tube end portions wherein the helical arc tube first and second end portions are inserted into the corresponding first and second grooves and rotated to follow the grooves and enters insertion openings in the first and second covering units for mounting the helical arc tube in the holder.

15. (New) The lamp of Claim 14 wherein the first and second grooves have respective openings through the bottom wall that extend from the insertion opening into and beneath the respective first and second covering units, wherein the lead wires can be initially inserted into the groove openings and the end portions of the arc tubes can subsequently be 5 inserted into the grooves and rotated into the insertion openings.

16. (New) The lamp of Claim 14 wherein the holder further includes a supporting unit for supporting the lead wires positioned to receive and separate the lead wires beneath the insertion openings, the supporting unit formed integral with the holder.